The Effects of Labor Force Changes: Employment and Retirement Post-Pandemic

Regional Economic Models, Inc.

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what does REMI say?sm

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- Introduction
- Topic Overview
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About Us

We are the nation's leader in dynamic local, state and national policy modeling.

From the start, REMI has sought to improve public policy through economic modeling software that informs policies impacting our day-to-day lives.

We were founded in 1980 on a transformative idea: government decision-makers should test the economic effects of their policies before they're implemented.

At REMI, we're inspired by a single goal: *improving public policies*.

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Our models are built for any state, county, or combination of counties in the United States.

Our Representative Clients

Our model users and consulting clients use REMI software solutions to perform rigorous economic analysis that critically influences policy.

UCONN UNIVERSITY OF CONNECTICUT

Sandia National Laboratories

AARP

McKinsey & Company

North Carolina Department of Commerce

European Commission

UNIVERSITY OF MICHIGAN

EY

ITEP INSTITUTE ON TAXATION AND ECONOMIC POLICY

nea NATIONAL EDUCATION ASSOCIATION

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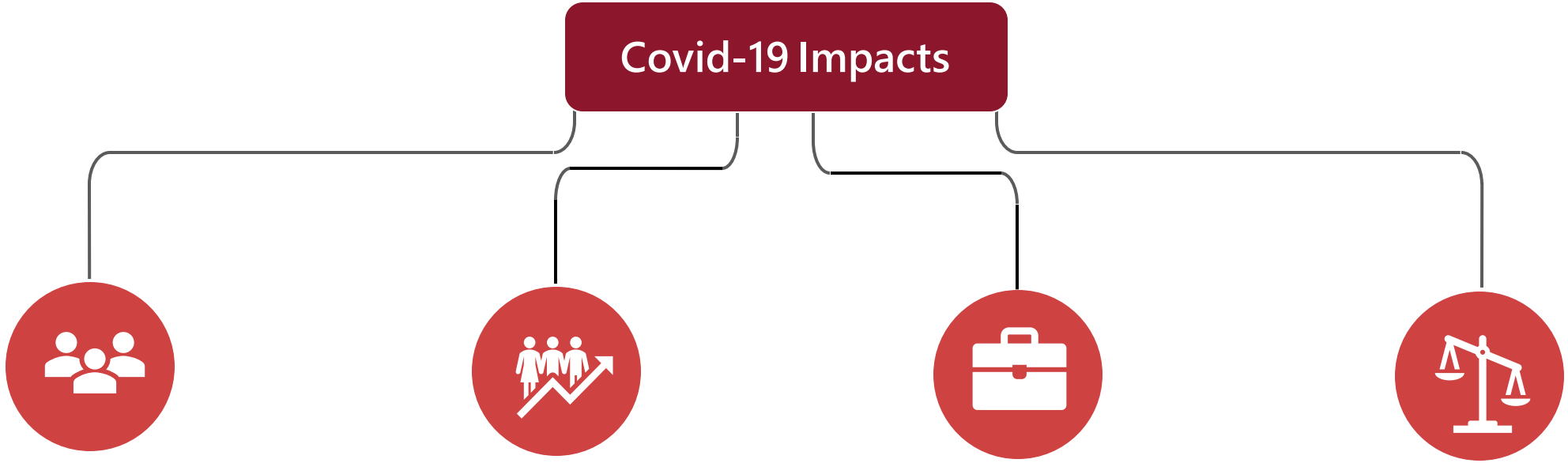
Pandemic-Induced Labor Market Trends



Employment

- Labor shortages
- Employers facing demands for higher wages

Labor Force Participation

- Older populations leaving labor force
- Black, Hispanic, female populations left labor force in high rates

Retirement

- Skilled trades losing employees, facing problem with untrained apprentices
- Strain on Social Security and other retirement benefits
- Earlier than planned exit from labor force, health risk considerations

Diversity, Equity & Inclusion (DEI) Implications

- Differential impacts on race, ethnicity, and gender
- Covid-19 impacts on Black, Hispanic, and female populations

How has the pandemic affected the labor market?

Older Populations

- Earlier retirement than expected
- Drawing on Social Security
- Retired populations migrating from urban areas

DEI Impacts

- Disproportionate impacts on Black, Hispanic, and female populations
- Early exits from labor market for certain disadvantaged populations
- Exacerbated health risks for different demographic groups

Skilled Trades

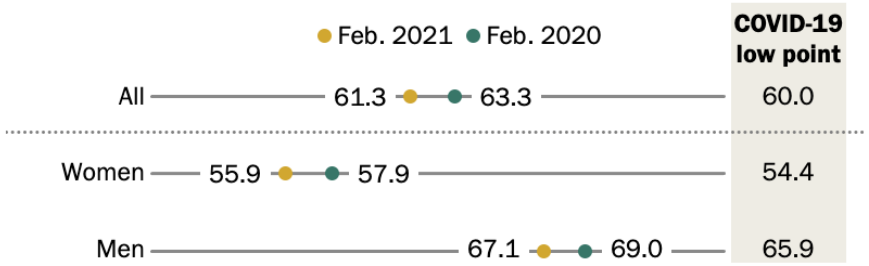
- Occupational training lagging in skilled trades
- Earlier retirement affects supply of skilled labor
- Demand for skilled labor is rising and current supply can't meet it

The covid-19 pandemic impacted the labor market in short- and long-term ways

How has the pandemic affected the labor market?

COVID-19 pandemic caused a sharp one-year decrease in labor force participation among women and men

% of women and men either employed or actively looking for work, February 2020 and February 2021



Note: Estimates refer to people ages 16 and older and are not seasonally adjusted.
Source: Pew Research Center analysis of 2020 and 2021 Current Population Survey monthly files (IPUMS).

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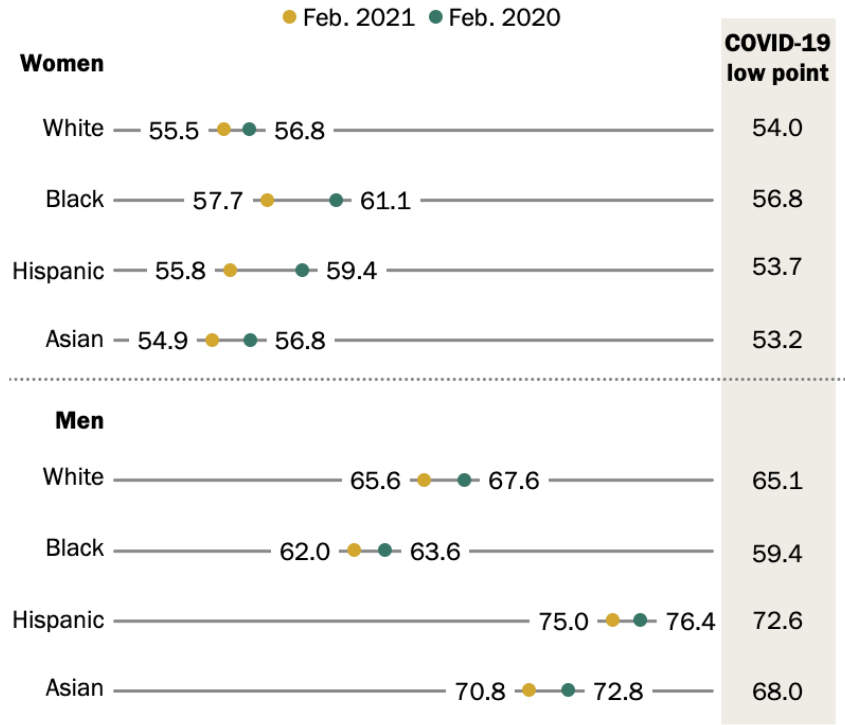
Labor force participation fell more among Hispanic and Black women in the first year of the pandemic

% of women and men either employed or actively looking for work, February 2020 and February 2021



Note: Estimates refer to people ages 16 and older and are not seasonally adjusted. White, Black and Asian workers include only those who report being only one race and are not Hispanic. Hispanic workers are of any race.
Source: Pew Research Center analysis of 2020 and 2021 Current Population Survey monthly files (IPUMS).

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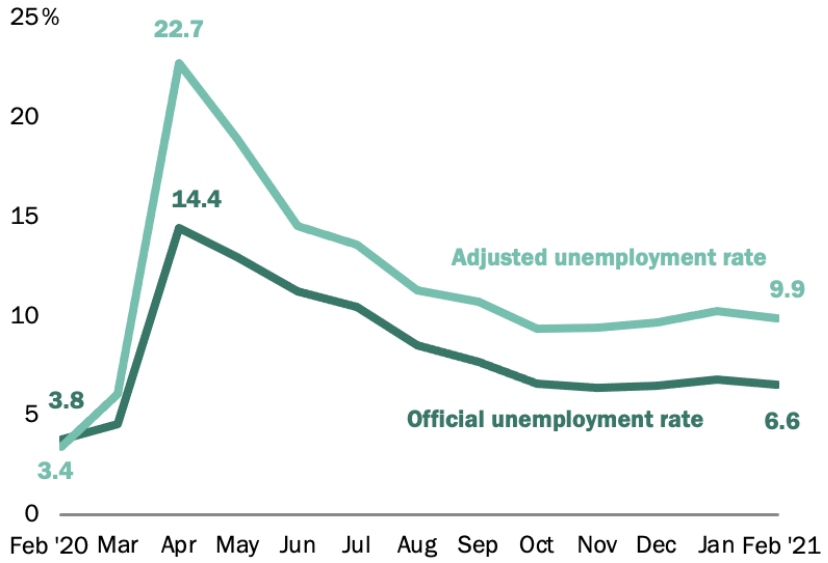
How has the pandemic affected the labor market?

U.S. unemployment rate may have been higher than it appeared in February 2021, perhaps more than double its level a year ago

Unemployment rate (%), February 2020 to February 2021



Note: The "official" unemployment rate is the share of workers in the labor force actively looking for work or on temporary layoff. The "adjusted" rate includes the additional number of workers who were not in the labor force in the current month based on the labor force participation rate in the same month the previous year *and* the additional number listed as "employed but absent from work for other reasons" compared with the same month in the previous year. Estimates refer to people ages 16 and older and are not seasonally adjusted.
Source: Pew Research Center analysis of 2019, 2020 and 2021 Current Population Survey monthly files (IPUMS).

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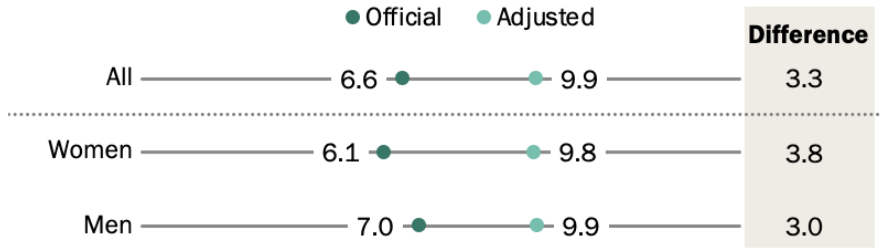
In February 2021, the unemployment rate for women and men was about 10%, adjusting for labor force exits

Unemployment rate (%) by gender, February 2021



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Source: Pew Research Center analysis of 2020 and 2021 Current Population Survey monthly files (IPUMS).

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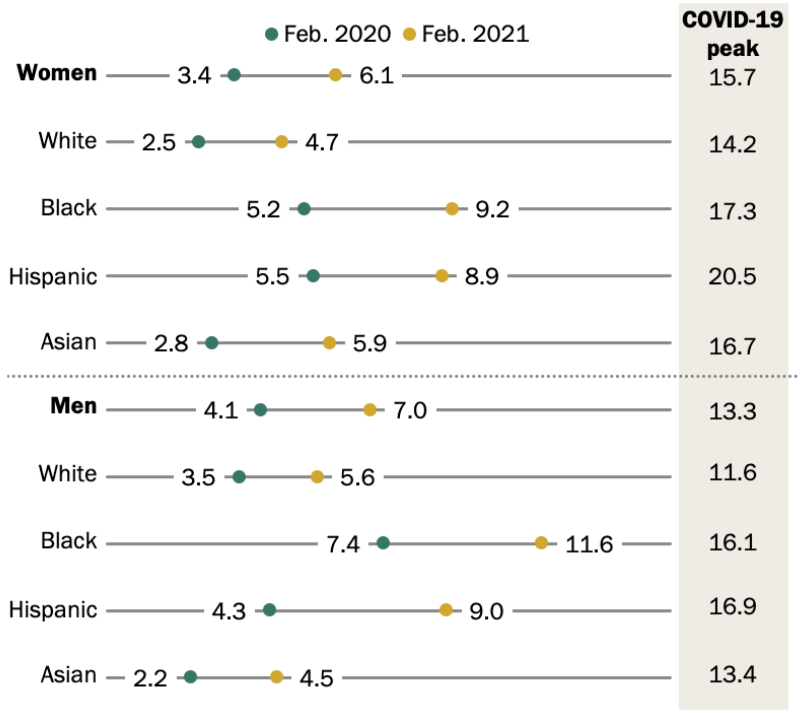
How has the pandemic affected the labor market?

Black and Hispanic workers continue to face higher unemployment rates than other workers

Unemployment rate (%) by gender and race/ethnicity, February 2020 and February 2021



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Source: Pew Research Center analysis of 2020 and 2021 Current Population Survey monthly files (IPUMS).

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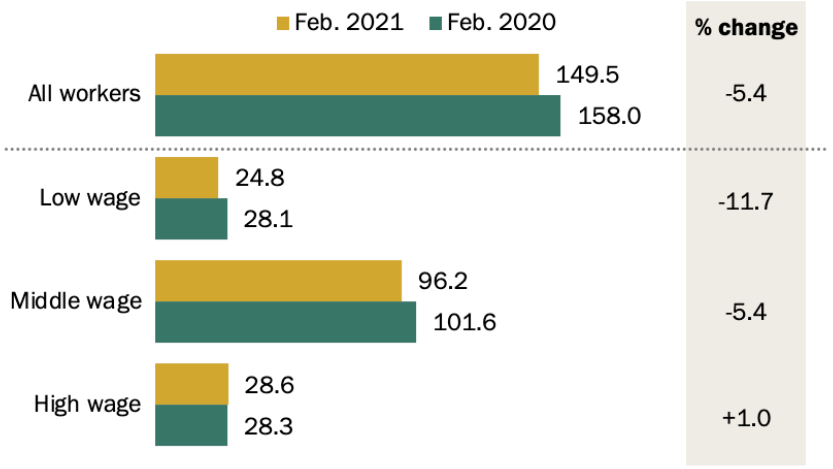
During COVID-19 pandemic, employment fell by more than 10% among low-wage workers

Employment (in millions), February 2020 and February 2021



Note: Estimates refer to people ages 16 and older and are not seasonally adjusted. Low-wage occupations paid less than $15 per hour on average, middle-wage occupations paid $15 to $45, high-wage occupations paid more than $45.
Source: Pew Research Center analysis of 2019 OES National Occupational Employment and Wage Estimates and 2020 and 2021 Current Population Survey monthly files (IPUMS).

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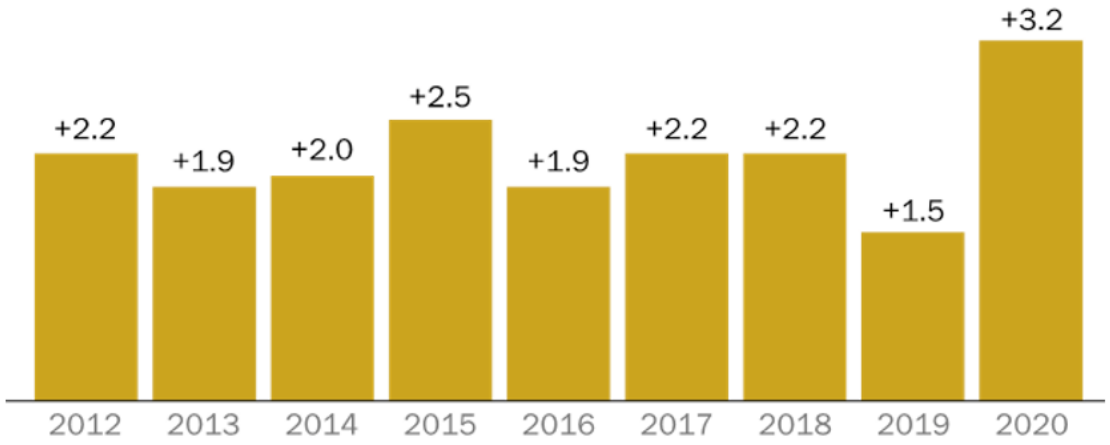
Covid-19's Retirement & Labor Shortage Impacts

The number of retired Baby Boomers rose more from 2019 to 2020 than in prior years

Annual increase in the retired U.S. Baby Boomer population (in millions)



Note: "Retired" refers to those not in the labor force due to retirement. Baby Boomers are those born between 1946 and 1964. Each year's retired Boomer population is based on the average of the July, August and September estimate.
Source: Pew Research Center analysis of July, August and September Current Population Survey monthly files (IPUMS)

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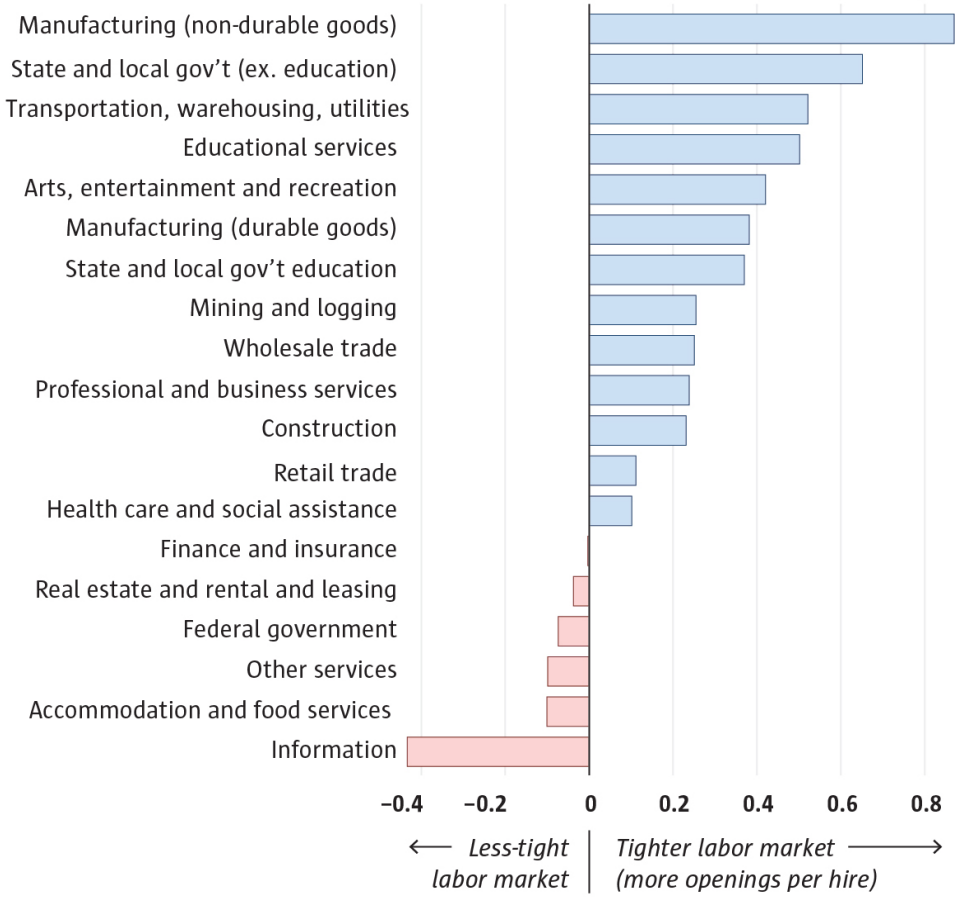
Industries that have stepped up the search for workers

April 2020 job openings per hire, change from pre-pandemic average



Note: Each month's hires are compared to the prior month's openings; seasonally adjusted
Source: Bureau of Labor Statistics

THE WASHINGTON POST

Economic Recovery & the REMI Model

Labor market recovery should be informed by long-term, data-driven economic impact analysis.

How can the economic modeling that REMI offers inform decisions about post-pandemic labor market changes?

Examples of economic & labor market recovery studies that used the REMI model

- Economic impact of covid-19 on employment across all sectors for the state of TN, Nashville, & Clarksville, Nashville Area Chamber of Commerce's Research Center
- Texas recovery after Hurricane Harvey, Texas Comptroller of Public Accounts
- Automotive sector recovery post-2008 financial crisis, Center for Automotive Research
- New Orleans recovery after Katrina, George Mason University

Economic modeling is needed to understand the economic impacts of the pandemic on labor

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The REMI Approach: Methodological Overview

During this discussion, we will explore the methodologies underlying the demographic portion of the REMI model and describe how multiple factors influence each region's labor force differently.

- Demographic component

- Diversity, Equity, & Inclusion (DEI) indicators
  - Employment by race/ethnicity and gender
  - Employment by educational attainment
  - Labor force participation

Methodological Approach

Overview of the demographic component of the REMI Model

- "Cohort component" method used to forecast regional population changes
- Components of demographic change calculated annually for each age cohort by sex and race
- Population at end of the year is starting population plus births & net migration, minus deaths
- Rates of change determined based on observed historical regional trends and national forecast trends
- Special populations treated differently (includes military, prisoners, college students

Primary data source is census data through the BEA (not directly from Census Bureau so that population estimates are consistent with personal income estimates)

Methodological Approach

Demographic Component: Birth, Survival, & Migration Rates

- Census estimates of total births, deaths, net migration (domestic and international) per county are used to calibrate county birth rates, survival rates, and migration rates
- Regional rates are created by adjusting state rates to fit total number of births from census
- Regional survival rates estimated by adjusting national survival rates to fit total number of deaths estimated in the area
- Net international migrants in each county are divided by race according to data from state population projections in census; each county in a state has same racial breakdown of net international migrants as the whole state
- Interregional migration is difference between in- and out-migration of an area within a year; divided into retired migrants and economic migrants
    - People over 65 who move between regions are retired migrants, do not respond to economic conditions
    - Economic interregional migrants are under 65, respond to changes in labor force, relative employment opportunity, relative wage rate, commodity access index, historical economic migration

Methodological Approach

Demographic Component: Special Populations

- Special populations include military, college students, and prisoners
- These groups are treated differently because they can make up a large portion of a region's population that appears not to age over time
  - Special populations are counted in their "home areas" before the population in an area is aged
  - Special populations estimated in the area are taken out and the estimated special populations from the area that currently exist in other areas are brought back in
  - The population is then aged one year
  - Special populations are added to and taken out of the population in the same age distribution as the previous year
  - In this way, the special population appears not to age and the total population of the nation is allowed to grow normally

Methodological Approach: DEI Indicators

Employment by demographics

- Calculate national shares by race/gender for each occupation using ACS data
- Calculate occupation weight for each race, gender, occupation
- Estimate labor force race shares by place of work
- Calculate the employment by occupation, race, and gender shares

Employment by educational attainment

- Estimate the number of new jobs created that do not require a college education
- Multiply employment by occupation and percentage of educational attainment by occupation (from BLS)
- Aggregate occupations by educational level into three levels; calculate summary occupations
- Gives table with occupations by two aggregative education levels

Labor force by demographics

- National participation rate is calculated from BLS
- Estimate parameters by age cohort, gender, and racial/ethnic groups for time fixed effects regression
- Participation rates by race, age, and gender are calculated using relative compensation rate, employment opportunity, demographic characteristics, and national participation rates & calibrated with the historical labor force totals
- Multiply by civilian non-institutional population to generate labor force

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Pandemic-induced labor market expectations

Retired Migrants Increase

- Increase Retired Migration
  - Out of urban counties into suburban and rural counties
  - Pandemic-stimulated population shifts for Baby Boomers out of cities

Skilled Labor Shortage

- Decrease supply of trained laborers
  - Early retirees, less opportunity for appren
  - Lack of younger workers in training
  - Employers facing higher wage rates

Participation Rate Decline

- Decrease labor force participation for
  - Populations 65 and older
  - Black Non-Hispanic group
  - Hispanic group
  - Female group

Social Welfare Strain

- Increase draw on Social Security
- Decrease employee contributions
- Increase draw on employee pensions

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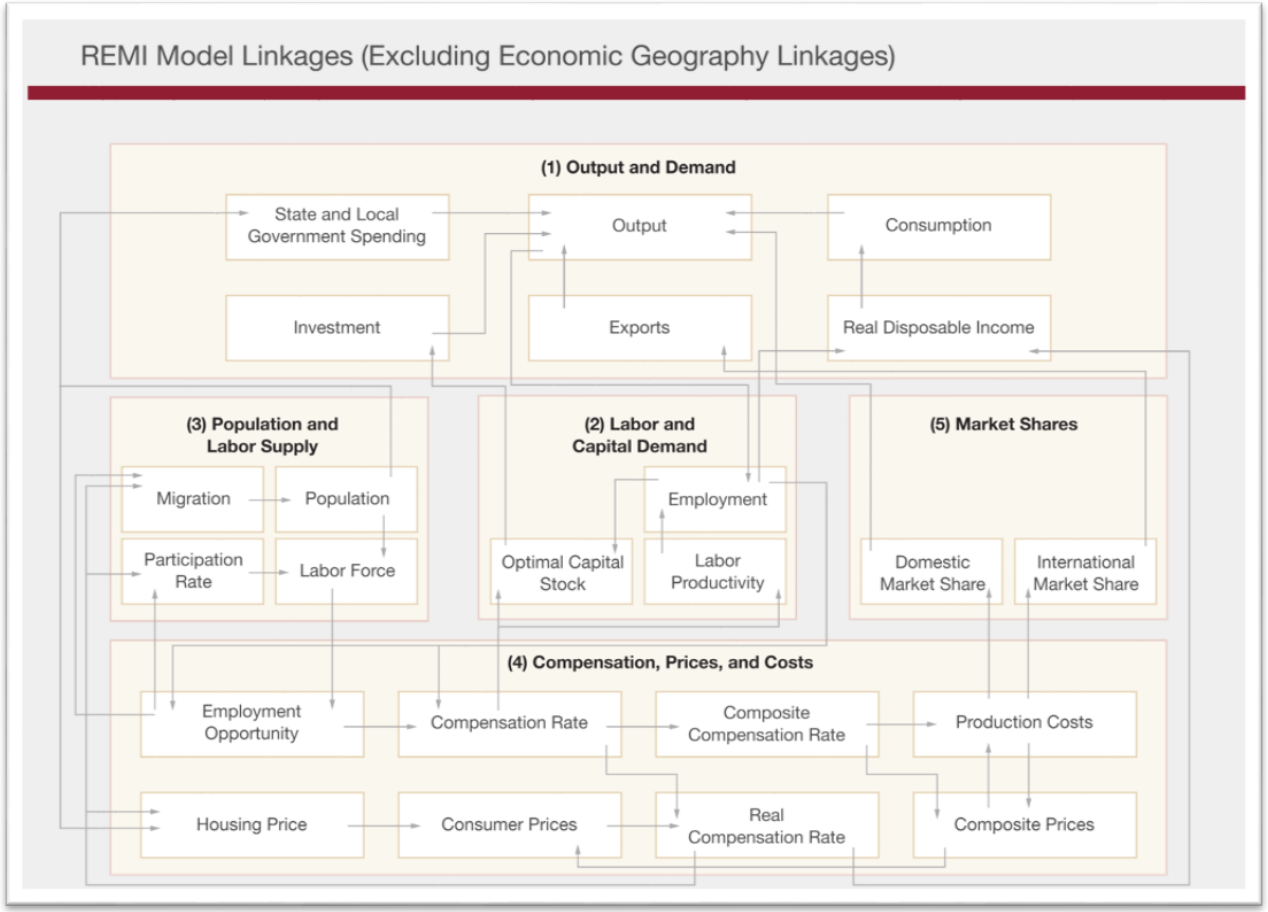
Model Simulation: REMI PI+

PI+ is the premier software solution for conducting dynamic macroeconomic impact analysis of public policy.

As our flagship model, PI+ specializes in generating realistic year-by-year estimates of the total local, state, and national effects of any specific policy initiative.



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Thank you for attending!

For more information, please contact
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